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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/604,712	06/27/2000	Bhalchandra Dattatray Deshpande	2705-106	4923

20575 7590 07/27/2004

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EXAMINER

ESCALANTE, OVIDIO

ART UNIT	PAPER NUMBER
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2645

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DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/604,712

**Applicant(s)**DESHPANDE, BHALCHANDRA  
DATTATRAY**Examiner**

Ovidio Escalante

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This action is in response to applicant's amendment filed on May 17, 2004. **Claims 1-23** are now pending in the present application.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-6,9,10,12-17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kung et al. US Patent 6,671,262 in view Bennett US Patent Pub. 2002/0075799.

**Regarding claim 1**, Kung teaches a method of reducing voice frame network inbound traffic congestion, (col. 6, lines 32-35; col. 33, lines 28-38), the method comprising:

determining whether a first defined threshold level of inbound voice and data traffic is reached (col. 33, lines 20-38; when the traffic congestion becomes greater, the quality of service drops) and

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freeing space within a single input queue for use by inbound voice traffic until the first defined threshold level of inbound traffic no longer is reached, (col. 33, lines 28-38).

While Kung teaches of receiving inbound voice and data traffic, Kung does not specifically teach of discriminating between inbound voice and data traffic.

In the same field of endeavor, Bennett teaches of a method for reducing traffic in a network by discarding data packets, (paragraph 10, lines 8-15). Bennett further teaches of discriminating between high priority traffic (e.g. voice or video - Kung) and lower priority traffic (data) within an input queue, (paragraph 10, lines 8-15 and paragraphs 13 and 15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kung by discriminating between inbound voice and data traffic as taught by Bennett so that higher priority data such as voice can be persevered and lower priority data such as data can be removed thereby reducing traffic.

***Regarding claims 2 and 10***, Kung teaches wherein said freeing space is performed until a second defined threshold level of inbound traffic is reached, the second defined threshold level being less than the first defined threshold level, (col. 3, lines 28-38; freeing space is performed until the quality of service increases in the input queue).

***Regarding claims 3, 12 and 19***, Kung, as applied above, does not teach of first analyzing the size of each packet of inbound voice and data traffic.

In the same field of endeavor Bennett, as applied above, teaches wherein said discriminating includes first analyzing the size of each packet of inbound voice and data traffic within the input queue and comparing the same to predefined packet size criteria, (paragraph 10 and paragraph 14).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kung by analyzing the size of each packet as taught by Bennett so that the system can organize packets and assign priority levels of the packets based on the size and importance.

***Regarding claims 4, 13, 20 and 22***, Kung teaches wherein said discriminating further includes second analyzing the rate at which packets of inbound voice and data traffic arrive in the input queue and comparing the same to predefined arrival rate criteria, (col. 33, lines 20-38).

***Regarding claims 5 and 14***, Kung in view of Bennett, as applied above, teach wherein said freeing space includes selectively discarding inbound data packets, (paragraph 10, lines 8-15; paragraphs 13-14, Bennett). As stated above, it would have been obvious to discriminate between voice and data so that data packets can be removed from the high priority queue.

***Regarding claims 6 and 15***, Kung in view of Bennett teach wherein said determining is performed upon an arrival of each packet of inbound voice and data traffic, (paragraph 13).

***Regarding claim 9***, Kung teaches an apparatus for use with an input queue representing inbound voice and data traffic on a voice frame network, (col. 6, lines 32-35), the apparatus comprising:

decision logic determining whether a first defined threshold level of inbound voice and data traffic represented in the input queue is reached, and queue management logic responsive to an affirmative determination from said decision logic, (col. 33, lines 28-38), said queue management logic freeing space within the input queue for use by inbound voice traffic until the first defined threshold level of inbound voice and data traffic no longer is reached, (col. 33, lines 20-38).

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Kung does not specifically teach said queue management logic discriminating between inbound voice and data traffic within the input queue.

In the same field of endeavor, Bennett teaches of a method for reducing traffic in a network by discarding data packets, (paragraph 10, lines 8-15). Bennett further teaches of discriminating between high priority traffic (e.g. voice or video - Kung) and lower priority traffic (data) within an input queue, (paragraph 10, lines 8-15 and paragraphs 13 and 15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kung by discriminating between inbound voice and data traffic as taught by Bennett so that higher priority data such as voice can be persevered and lower priority data such as data can be removed thereby reducing traffic.

***Regarding claim 16***, Kung teaches a computer-readable medium containing a program for reducing voice frame network inbound traffic congestion, (col. 6, lines 32-35), the program comprising:

instructions for determining whether a first defined threshold level of inbound voice and data traffic is reached and if so then signaling such determination, (col. 33, lines 28-38), and

instructions responsive to the signaling for discarding data thereby to free space within the input queue for use by inbound voice traffic until the first defined threshold level of inbound traffic no longer is reached, (col. 33, lines 20-38).

Kung does not specifically teach instructions for discriminating between inbound voice and data traffic within an input queue.

In the same field of endeavor, Bennett teaches of a method for reducing traffic in a network by discarding data packets, (paragraph 10, lines 8-15). Bennett further teaches of

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discriminating between high priority traffic (e.g. voice or video - Kung) and lower priority traffic (data) within an input queue, (paragraph 10, lines 8-15 and paragraph 13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kung by discriminating between inbound voice and data traffic as taught by Bennett so that higher priority data such as voice can be persevered and lower priority data such as data can be removed thereby reducing traffic.

*Regarding claims 17 and 21*, Kung teaches an apparatus for reducing voice frame network inbound traffic congestion, (col. 6, lines 32-35), the apparatus comprising:

means for determining whether a first defined threshold level of inbound voice and data traffic is reached and if so then signaling such determination, (col. 33, lines 28-38), and

means responsive to the signaling for discarding data thereby to free space within the input queue for use by inbound voice traffic until the first defined threshold level of inbound traffic no longer is reached, (col. 33, lines 20-38).

Kung does not specifically teach means for discriminating between inbound voice and data traffic within an input queue.

In the same field of endeavor, Bennett teaches of a method for reducing traffic in a network by discarding data packets, (paragraph 10, lines 8-15). Bennett further teaches of discriminating between high priority traffic (e.g. voice or video - Kung) and lower priority traffic (data) within an input queue, (paragraph 10, lines 8-15 and paragraph 13). Bennett further teaches said discriminating means including means for first analyzing the size of each packet of inbound voice and data traffic within the input queue (paragraph 14) and means for first comparing the same to predefined packet size criteria (paragraphs 13 and 14) and wherein the

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discarding of data is performed until a second defined threshold level of inbound traffic is reached, the second defined threshold level being less than the first defined threshold level, (paragraph 10, lines 8-15 and paragraphs 13-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kung by discriminating between inbound voice and data traffic as taught by Bennett so that higher priority data such as voice can be persevered and lower priority data such as data can be removed thereby reducing traffic.

5. Claims 7,8,11,18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kung in view of Bennett and further in view of Farris US Patent 6,064,653.

*Regarding claims 7,8,11,18 and 23*, Kung teaches wherein said freeing space is performed until a second defined threshold level of inbound traffic is reached, (col. 33, lines 20-38) and the second defined threshold level being less than the first defined threshold level, (col. 33, lines 20-38).

Kung in view of Bennett do not teach providing a user interface that permits a user to define the first and second defined threshold levels.

Farris teaches that it was well known in the art to provide a user interface that permits a user to define a first and second defined threshold levels for determining traffic congestion, (col. 10, lines 12-32; col. 14, lines 13-26,34-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kung and Bennett by providing a user interface so that the user can define their quality of service that they want to receive for using the voice data network.



***Response to Arguments***

6. Applicant's arguments filed May 17, 2004 have been fully considered but they are not persuasive.

***As per claims 1,9,16 and 21:***

Applicant contends that Kung does not teach “determining whether a first defined threshold level of *inbound* voice and data traffic is reached...” and “free space within the input queue for use by the inbound voice traffic until the first defined threshold of *inbound* traffic..” since Kung teaches that the “output” packets are monitored. Applicant also states that Kung may operate on the inbound data but not based on an inbound measure. The Examiner respectfully disagrees.

While Kung states that the outbound traffic of the input queue is monitored, the call manager uses this information to determine that a threshold value of the “inbound traffic” was reached. The outbound information is a feedback loop to alert the call manager that the quality of service has declined in the “inbound queue” and thus action must be taken to raise the quality of service. Therefore, Kung determines that inbound traffic has reached the threshold value based on the output level of the inbound queue which was derived from the feedback loop. Furthermore, the Examiner believes that the claims merely state that the threshold level of inbound voice and traffic has to be determined. There is no limitation on how to determine the threshold or that it cannot be based upon an outbound measurement. Since, the data of Kung operates on the inbound data then the Examiner believes that Kung meets the claimed limitations of determining the threshold valued of inbound traffic.

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Applicant further contends that since Kung has multiple queues of data to be processed, freeing space is not directed to a single input queue. The Examiner respectfully disagrees.

While Kung shows multiple queues the Examiner believes that each queue in itself is a single queue since each queue is separate from each other. Therefore, when space is freed, then each single queue will be processed for freeing space for each respective queue.

***As per claims 2 and 10:***

Applicant contends that there is no “second defined threshold” since freeing space until a quality of service improved is still directed to a first threshold and freeing space until the buffer is no longer at capacity is also related to the first threshold. The Examiner respectfully disagrees.

The second threshold is anything that is less than the first threshold level. In the example the “second threshold” represents a value that is less than the first threshold level i.e. the second threshold is a variable value that is compared to the reference value of the first threshold value and when reached, will let the system know that the quality of service is acceptable.

***As per claims 3,12 and 19:***

Applicant contends that the references do not teach analyzing the size of each packet of inbound voice and data packet in *a single input queue*. The Examiner respectfully disagrees.

As shown in the Office Action and as stated above with regard to “single input queue”, Kung in view of Bennett teach of analyzing the size of each packet as shown in paragraphs 10 and 14 of Bennett in the single input queue of Kung.

***As per claims 4,13,20 and 22:***

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Applicant contends that Kung does not analyze inbound traffic but bases the quality of service on the rate of outbound traffic and there is no “second analyzing”. The Examiner respectfully disagrees.

As stated above, the outbound traffic measurement of the input queue is analyzed at the input queue, therefore the rate is also analyzed at the input queue based on information from the feedback loop as also shown above.

***As per claims 5,6,14 and 15:***

Applicant contends that the references do not teach selectively discarding inbound data packets from a single queue since Kung just moves data packets. The Examiner respectfully disagrees.

As stated in the office action Bennett teaches that data packets are “discarded” as shown in paragraphs 10, 13-14 and the determining is made when each packet arrives.

***As per claims 7,8,11,18 and 23:***

Applicant contends that none of the references teaches the use of a second threshold and a user interface to allow setting of these thresholds since the office action merely states that the threshold are settable and not how. The Examiner respectfully disagrees.

In col. 14, lines 58+, Farris teaches that the threshold level may be changed by pre-subscribed options or elicited by prompts (user interface to the system). Therefore, the Examiner believes that a user (subscriber) may set the threshold level through system prompts.

***Conclusion***

7. Any response to this action should be mailed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

or faxed to:

(703) 872-9306, (for formal communications intended for entry)

Or:

(703) 872-9306, (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal  
Drive, Arlington, VA, Sixth Floor (Receptionist).

8. Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Ovidio Escalante whose telephone number is 703-308-6262. The  
examiner can normally be reached on M-F (6:30AM - 5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Fan S Tsang can be reached on 703-305-4895. The fax phone number for the  
organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent  
Application Information Retrieval (PAIR) system. Status information for published applications  
may be obtained from either Private PAIR or Public PAIR. Status information for unpublished  
applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ovidio Escalante  
Examiner  
Group 2645  
July 26, 2004

FAN TSANG  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

A handwritten signature in black ink, appearing to read 'Fan Tsang', written over the printed name and title.